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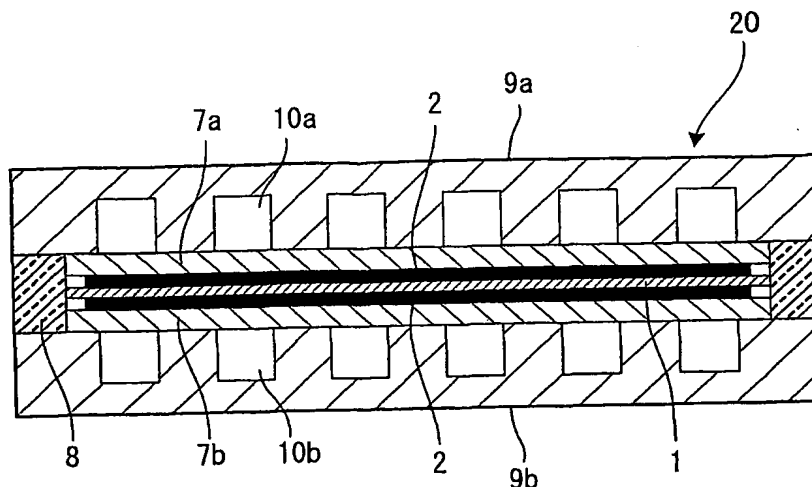
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- (71) Applicant (for all designated States except US): **NISSAN MOTOR CO., LTD.** [JP/JP]; 2, Takara-cho, Kanagawa-ku, Yokohama-shi, Kanagawa 2210023 (JP).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **SHIMOI, Ryolchi** [JP/JP]; 4-36-13, Tomiokanishi, Kanazawa-ku, Yokohama-shi, Kanagawa 2360052 (JP). **OHMA, Atsushi** [JP/JP]; 1-43-20, Oooka, Minami-ku, Yokohama-shi, Kanagawa 2320061 (JP). **ONO, Yoshitaka** [JP/JP]; 3-15-8-505, Morisaki, Yokosuka-shi, Kanagawa 2380023 (JP).
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(57) Abstract: A catalyst layer 2 is formed by conductive particles carrying catalyst particles 5, and a boundary layer is disposed adjacent to the catalyst layer 2 and is positioned between a portion which is easily contacted with an oxygen gas and the catalyst layer. The boundary layer 3 is formed by the conductive particles 4 carrying the catalyst particles 5 and a catalyst-carrying amount in the boundary layer 3 is smaller than a catalyst-carrying amount in the catalyst layer 2. Or a hydrophilic treatment is carried out to the conductive particles 4 of the boundary layer 3 by a hydrophilic material, while the conductive particles 4 in the boundary layer 3 do not carry the catalyst particles 5.